

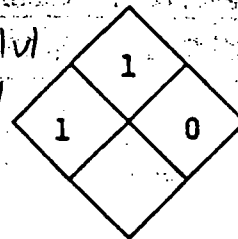
|                                 |
|---------------------------------|
| MSDS NO.                        |
| PRODUCT CODE NO.<br>04624,04625 |
| UN NO.<br>NONE                  |

# Material Safety Data

Union Oil Company of California



PORSE  
11.3.25.1v  
08/08/84



UNION 76 DIVISION

|   |  |
|---|--|
| <b>MANUFACTURER</b><br>UNION 76 DIVISION - WEST, UNION OIL COMPANY OF CALIFORNIA<br>461 SOUTH BOYLSTON STREET<br>LOS ANGELES, CALIFORNIA 90017<br>(213) 977-7589<br><br>CONTACT: 76 DIVISION MSDS COORDINATOR | <b>Transportation Emergencies:</b><br>Call CHEMTREC (800) 424-9300<br>For AK & HI: (202) 483-7616<br><b>Health Emergencies:</b><br>Call Los Angeles<br>Poison Information Center (24 hrs.)<br>(213) 664-2121 |
|---|--|

|                          |                            |
|--------------------------|----------------------------|
| PRODUCT                  | UNION TURBINE OIL 100, 150 |
| COMMON NAME              |                            |
| GENERIC NAME             | INDUSTRIAL OILS            |
| CHEMICAL NAME            |                            |
| CHEMICAL FAMILY          | PETROLEUM HYDROCARBON      |
| DOT PROPER SHIPPING NAME | NOT APPLICABLE             |

## WARNING STATEMENTS

FOR INDUSTRIAL USE ONLY

## SECTION I - INGREDIENTS

\*THRESHOLD LIMIT VALUE SET BY: A. OSHA B. ACGIH C. SEE SECTION III D. OTHER NE. NOT ESTABLISHED  
UNITS ARE IN ppm UNLESS SPECIFIED OTHERWISE. TLV\*

Oil mist, if generated

5mg/m<sup>3</sup> A,B

The identities of ingredients that are trade secrets are excluded from this list.

USEPA SF



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**SECTION II - EMERGENCY AND FIRST AID PROCEDURES**EMERGENCY: HAVE PHYSICIAN CALL LOS ANGELES POISON  
INFORMATION CENTER (24 hrs.) (213) 664-2121

|              |  |
|--------------|--|
| EYE CONTACT  | If irritation from exposure to fumes or vapors develops, move away from exposure and into fresh air. Flush the affected eye(s) with clean running water for at least 15 minutes. If redness or irritation develops, seek medical attention.  |
| SKIN CONTACT | DO NOT USE GASOLINES, THINNERS OR SOLVENTS TO REMOVE THIS PRODUCT FROM THE SKIN. Wipe any excess material from the skin with a clean dry cloth. Remove contaminated clothing. Cleanse the affected skin area(s) thoroughly with soap and water and, if necessary, a waterless skin cleanser. If irritation or redness develops and persists, seek medical attention. |
| INHALATION   | If respiratory tract irritation or symptoms of intoxication develop, victim should be moved away from exposure and into fresh air. If victim is not breathing or if breathing difficulties develop, artificial respiration or oxygen should be administered by qualified personnel. Seek immediate medical attention.  |
| INGESTION    | Do not induce vomiting.<br>If victim is conscious and alert give 2 or 3 cups of milk or water to drink. No other first aid is required. If gastrointestinal irritation develops and persists, seek medical attention.  |

**SECTION III - PHYSIOLOGICAL EFFECTS AND HEALTH INFORMATION**

|                 |   |
|-----------------|---|
| EYE EFFECTS     | This product may cause eye irritation. Direct contact with the product or repeated or prolonged exposure to its vapors, fumes or mists may cause burning, tearing, redness and conjunctivitis.  |
| SKIN EFFECTS    | Prolonged or repeated contact with this product or its vapors, fumes or mists may cause redness, irritation and dermatitis.   |
| ACUTE EFFECTS   | Exposure to mists, or prolonged or repeated exposure to vapors when this product is heated, may cause transient irritation to the nose, throat and upper respiratory tract. Exposure to higher concentrations for prolonged periods may result in more serious respiratory tract irritation and inflammation, dizziness, lightheadedness and headache.<br><br>Ingestion of this product may cause irritation to the stomach and intestinal tract. |
| CHRONIC EFFECTS | None known for this product.  |

## SECTION IV - SPECIAL PROTECTION INFORMATION

|  |  |
|--|--|
| RESPIRATORY PROTECTION<br>(SPECIFY TYPE) | If airborne concentrations exceed the listed exposure limits, a suitable filter-type respirator should be worn. SEE ADDENDUM   |
| VENTILATION                              | General mechanical ventilation may be adequate for maintaining airborne concentrations below established exposure limits. If general ventilation is inadequate, supplemental local exhaust may be required. Other special precautions, such as respiratory protection may be required if airborne concentrations cannot be reduced to below the recommended exposure limit by ventilation. |
| PROTECTIVE GLOVES                        | The use of gloves which are impermeable to the specific material handled is advised to prevent skin contact and possible irritation.   |
| EYE PROTECTION                           | Chemical goggles are recommended to safeguard against potential eye contact, irritation, or injury.  |
| OTHER PROTECTIVE EQUIPMENT               | It is recommended that sink and eye wash be available in the work area. Barrier creams that are specific for oil-based materials are recommended when gloves are impractical.  |

## SECTION V - REACTIVITY DATA

|  |  |
|--|--|
| STABILITY                                  | Stable   |
| CONDITIONS TO AVOID                        | Avoid contact with any source of ignition.   |
| COMPATIBILITY<br>(MATERIALS)<br>(TO AVOID) | Avoid contact with strong oxidizing agents.  |
| HAZARDOUS DECOMPOSITION PRODUCTS           | Thermal decomposition in the presence of air may yield major amounts of oxides of carbon and minor amounts of oxides of sulfur and nitrogen. |
| HAZARDOUS POLYMERIZATION                   | Will not occur   |
| CONDITIONS TO AVOID                        |  |

## SECTION VI - SPILL OR LEAK PROCEDURES

HIGHWAY OR RAILWAY SPILLS. CALL CHEMTREC (800) 424-9300 For AK & HI:  
(202)483-7616

|   |  |
|---|--|
| PRECAUTIONS IN CASE OF RELEASE OR SPILL | Collect leaking liquid in suitable containers. Absorb spilled liquid in sand or inert absorbent, and dispose in accordance with local, county, state and federal regulations. Notify Coast Guard National Response Center (phone number 800-424-8802) if spill of any amount is made into or upon U.S. navigable waters, the contiguous zone, or adjoining shoreline. Consult 40 Code of Federal Regulations Part 110 and state and local law. |
| WASTE DISPOSAL METHOD                   | Dispose of product in accordance with local, county, state, and federal regulations.   |

**SECTION VII - STORAGE AND SPECIAL PRECAUTIONS**

|                                  |   |
|----------------------------------|---|
| HANDLING AND STORING PRECAUTIONS | Store in a cool, dry location away from incompatible materials.   |
| OTHER PRECAUTIONS                | Laundry saturated clothing before wearing. Avoid generating oil mists while handling. Use good personal hygiene practice. |

**SECTION VIII - FIRE AND EXPLOSION HAZARD DATA**

|                                    |  |                   |                    |
|------------------------------------|--|-------------------|--------------------|
| DOT FLAMMABILITY CLASSIFICATION    | Not Regulated  | FLASH POINT RANGE | 226°C (439°F), COC |
| EXTINGUISHING MEDIA                | Water and foam may cause frothing. Extinguish with dry chemical, CO <sub>2</sub> , sand or earth.  |                   |                    |
| UNUSUAL FIRE AND EXPLOSION HAZARDS | No unusual fire or explosion hazards are expected.   |                   |                    |
| FIRE FIGHTING PROCEDURES           | Water spray may be useful in minimizing vapors and cooling containers exposed to heat and flame. Move containers away from fire area if you can do it without risk. For massive fire in cargo area, use unmanned hose holder or monitor nozzles. Withdraw immediately in case of rising sound from venting safety device or discoloration of tank. |                   |                    |

**SECTION IX - PHYSICAL DATA**

|   |   |                                       |                                |                                   |
|---|---|---------------------------------------|--------------------------------|-----------------------------------|
| APPROXIMATE BOILING RANGE<br>Above 316°C(600°F) | VAPOR DENSITY<br>Heavier than air                                 | EVAPORATION RATE<br>Slower than ether | PERCENT VOLATILE<br>Negligible | SOLUBILITY IN WATER<br>Negligible |
| SPECIFIC GRAVITY<br>0.90                        | APPROXIMATE BULK DENSITY  |                                       |                                |                                   |
| APPEARANCE AND ODOR                             | This product is a clear, brown liquid with a characteristic odor. |                                       |                                |                                   |

**SECTION X - DOCUMENTARY INFORMATION**

|                                 |                       |                   |                           |                   |
|---------------------------------|-----------------------|-------------------|---------------------------|-------------------|
| PRODUCT CODE NO.<br>04624,04625 | ISSUE DATE<br>8/08/84 | REPLACES MSDS NO. | PREVIOUS PRODUCT CODE NO. | PREVIOUSLY ISSUED |
|---------------------------------|-----------------------|-------------------|---------------------------|-------------------|

**DISCLAIMER OF EXPRESS AND IMPLIED WARRANTIES**

The information in this document is believed to be correct as of the date issued. HOWEVER, NO WARRANTY OF MERCHANTABILITY, FITNESS FOR ANY USE, OR ANY OTHER WARRANTY IS EXPRESSED OR IS TO BE IMPLIED REGARDING THE ACCURACY OR COMPLETENESS OF THIS INFORMATION. THE RESULTS TO BE OBTAINED FROM USE OF THIS INFORMATION OR THE PRODUCT, OR THE SAFETY OF THIS PRODUCT, OR THE HAZARDS RELATED TO ITS USE. This information and the product are furnished on condition that the person receiving them shall make his own determination as to the suitability of the product for his particular purpose and on the condition that he assume the risk of his use thereof.

PRODUCT: TURBINE OIL 100, 150

WEST

ADDENDUM

Section IV - SPECIAL PROTECTION INFORMATION

Respiratory Protection:

In case of concurrent vapor or gas exposure, depending on the airborne concentration, an appropriate filter and cartridge respirator gas mask and canister (NIOSH approved, if available), or supplied-air equipment should be worn if concurrent vapor and gas exposure is significant.

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INDUSTRIAL PRODUCTS  
TURBINE OILS

CODE 700 REGAL OIL R&O 32  
CODE 701 REGAL OIL R&O 46  
CODE 702 REGAL OIL R&O 68  
CODE 704 REGAL OIL R&O N-68  
CODE 706 REGAL OIL R&O 100  
CODE 707 REGAL OIL R&O N-100

Typical Characteristics

| Regal Oil R&O         | 32         | 46    | 68    | N-68  | 100   | N-100 |
|-----------------------|------------|-------|-------|-------|-------|-------|
| Appearance            | Light Pale |       |       |       |       |       |
| Gravity, °API         | 32.2       | 29.9  | 30.3  | 26.1  | 27.8  | 28.0  |
| Flash, COC, °F        | 390        | 410   | 445   | 380   | 450   | 405   |
| Pour Pt., °F          | -35        | 0     | 0     | -40   | +15   | -25   |
| Viscosity cSt at 40°C | 30.9       | 42.4  | 61.6  | 64.5  | 92.0  | 92.7  |
| cSt at 100°C          | 5.48       | 6.6   | 8.08  | 7.5   | 10.3  | 9.4   |
| SUS at 100°F          | 158        | 218   | 319   | 339   | 480   | 487   |
| SUS at 210°F          | 44         | 48    | 53    | 50    | 61    | 56    |
| Viscosity Index       | 44         | 107   | 97    | 70    | 92    | 70    |
| Color, ASTM           | 1.0        | 1.0   | 1.0   | L2.5  | L1.5  | L2.5  |
| Ash, Wt. %            | 0.002      | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 |

Regal Oils R&O 32, 46, 68, N-68, 100 and N-100 are premium grade oils formulated to meet the stringent rust and oxidation requirements of steam and gas turbines, hydraulic systems and air compressors. The Regal Oil R&O 32, 46, 68 and 100 grades are formulated with high quality paraffin distillate stocks while the N-68 and N-100 are formulated with high quality naphthenic distillate stocks. All grades contain a carefully balanced rust and oxidation inhibitor package and an effective anti-foamant which provides excellent anti-foam and air release characteristics. In addition to good oxidation stability and good rust protection, these products have good low temperature characteristics. In terms of service performance these properties mean stable viscosities, resistance to the formation of oxidation acids which lead to formation of deposits and also promote metal corrosion, protection against rusting that can lead to scoring of bearings and journals and sticking of close fitting components, resistance to foaming and rapid air release, and good water separating characteristics.

Regal oils R&O are recommended for all types of turbines except for a few gas turbines such as GE Frame 7000 gas turbines which require special high temperature lubricants. They are also recommended for air compressor and turbo-blowers, as well as hydraulic systems where an anti-wear lubricant is not required, and those using axial piston pumps which contain silver plated parts, such as those manufactured by Lucas and DeLaval. Applications also include electric hoists, pumps, small gear sets, electric motor bearings, machine tools, rolling bearings and many other industrial applications. Refer to page 121 of the Appendix for those products approximating AGMA specifications.

5 Gal Pail  
55 Gal Drum

100  
4.86 Gal  
3.16 Gal

100 N  
NA  
3.52 Gal

Product in Stock